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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,458	03/01/2004	Sundar G. Sankaran	15685P215	3465
45222      7590      08/10/2007 ARRAYCOMM/BLAKELY 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040			EXAMINER HO, HUY C	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 08/10/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/791,458	Applicant(s) SANKARAN ET AL.	
	Examiner Huy C. Ho	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 05/07/2007 have been fully considered but they are not persuasive.

The argued features, i.e., a method for randomizing data to be sent from a base station of a wireless radio network to a user terminal accessing the wireless radio network, comprising: receiving data from a data source to be communicated to a remote radio; generating an initialization vector using an identifier associated with the user terminal; randomizing the received data using scrambling sequence generator and an identifier associated with the remote radio, reads upon Garcia, JR in view of Zehavi as follows.

Garcia is discussing a system and method for data scrambling, generating digital data message combined with a scrambling vector, randomizing of digital data messages combining the digital data with a plurality of predetermined scrambling vectors, thus disclosing generating an initialization vector associated with the user terminal; randomizing the received data using scrambling sequence generator associated with the remote radio. Garcia does not show the identifier, and was modified by Zehavi to show a method and apparatus for data transmission on forward links, where each data frame is covered with Walsh code, spread with short PN codes, and the data frame is scrambled with a long PN code. The long PN code identifies a particular remote station for which the transmission is destined and only the remote station with the identical long PN sequence is able to demodulate the signal, thus it would be obvious to one of ordinary skill in the art to modify Garcia and have use of an identifier, as taught by Zehavi.

As the result, the argued features are written such that they read upon the cited references.

Art Unit: 2617

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 22-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

*Explain why?*

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2617

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1, 4, 6-14, 16-25 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia, JR. et al (2005/0073945) and further in view of Zehavi (6,185,199).

Consider claim 1, (Currently Amended) Garcia discloses a method performed by a first radio (see the abstract, section [14]-[15], figure 1), the method comprising:

receiving data from a data source to be communicated to a remote radio (see sections [14]-[15], [26]);

randomizing the received data associated with the remote radio (the abstract, sections [12]-[15], [28], [31], [33]-[35], describing the scrambling vectors are combined with digital messages and being used by both the transmitter and receiver, so disclosing the received data associated with the remote radio).

Garcia does not specifically show an identifier. In an analogous art, Zehavi discloses an identifier (see figures 2-4, 6-7, col 5 lines 54-65, col 7 lines 65-67, col 8 lines 33-35, col 12 lines 4-10, describing each remote station is identified by a unique long PN sequence, so disclosing an identifier).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Garcia's invention, and having an identifier, as taught by Zehavi, thus improving method and apparatus for data transmission, as discussed by Zehavi (see col 1 lines 5-10, col 2 lines 1-10, 55-65, col 3 lines 60-67).

Consider claim 7, (Original) Garcia discloses a method for randomizing data to be sent from a base station of a wireless radio network to a user terminal accessing the wireless radio network (the abstract, figure 1, sections [12]-[15]), the method comprising:

generating an initialization vector associated with the user terminal (figure 2, sections [12]-[13], [15]-[17], [31], [33]);

seeding a scrambling sequence generator with the initialization vector ([31]-[32]); and

randomizing the data using the scrambling sequence generator (sections [47]-[49]).

Garcia does not specifically show an identifier. In an analogous art, Zehavi discloses an identifier (see figures 2-4, 6-7, col 5 lines 54-65, col 7 lines 65-67, col 8 lines 33-35, col 12 lines 4-10, describing each remote station is identified by a unique long PN sequence, so disclosing an identifier).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Garcia's invention, and having an identifier, as taught by Zehavi, thus improving method and apparatus for data transmission, as discussed by Zehavi (see col 1 lines 5-10, col 2 lines 1-10, 55-65, col 3 lines 60-67).

Consider claim 12, (Original) Garcia discloses an initialization vector to be used to initialize a randomizer of a first radio communicating with a remote radio (the abstract, figure 2, sections [31]-[33]), the initialization vector comprising:

an associated with the remote radio (sections [31]-[33], describing the message combined with the scrambling vector are used for both the transmitter and the receiver, thus disclosing associated with the remote radio).

Garcia does not specifically show an identifier. In an analogous art, Zehavi discloses an identifier (see figures 2-4, 6-7, col 5 lines 54-65, col 7 lines 65-67, col 8 lines 33-35, col 12 lines 4-10, describing each remote station is identified by a unique long PN sequence, so disclosing an identifier).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Garcia's invention, and having an identifier, as taught by Zehavi, thus improving method and apparatus for data transmission, as discussed by Zehavi (see col 1 lines 5-10, col 2 lines 1-10, 55-65, col 3 lines 60-67).

Consider claim 17, (Original) Garcia discloses a method for randomizing data to be sent from a user terminal to a base station of a wireless radio network (see the abstract, sections [14]-[15], figure 1), the method comprising:

generating an initialization vector associated with the base station (figure 2, sections [12]-[13], [15]-[17], [31], [33]);

seeding a scrambling sequence generator with the initialization vector ([31]-[32]) and randomizing the data using the scrambling sequence generator (sections [47]-[49]).

Garcia does not specifically show an identifier. In an analogous art, Zehavi discloses an identifier (see figures 2-4, 6-7, col 5 lines 54-65, col 7 lines 65-67, col 8 lines 33-35, col 12 lines 4-10, describing each remote station is identified by a unique long PN sequence, so disclosing an identifier).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Garcia's invention, and having an identifier, as taught by Zehavi, thus improving method and apparatus for data transmission, as discussed by Zehavi (see col 1 lines 5-10, col 2 lines 1-10, 55-65, col 3 lines 60-67).

Consider claim 25, (Currently Amended) Garcia discloses a communications device (figure 1), comprising:

a data source containing data to be transmitted to a remote radio (sections [8], [11]-[13]); and a randomizer to scramble the data related to associated with the remote radio (the abstract, sections [12]-[13], [28], [31], [33], describing the scrambling vectors are used by both the transmitter and receiver, so disclosing the received data associated with the remote radio).

Garcia does not specifically show an identifier. In an analogous art, Zehavi discloses an identifier (see figures 2-4, 6-7, col 5 lines 54-65, col 7 lines 65-67, col 8 lines 33-35, col 12 lines 4-10, describing each remote station is identified by a unique long PN sequence, so disclosing an identifier).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Garcia's invention, and having an identifier, as taught by Zehavi, thus improving method and apparatus for data transmission, as discussed by Zehavi (see col 1 lines 5-10, col 2 lines 1-10, 55-65, col 3 lines 60-67).

**Consider claims 4, 28 (Original)** The method of claims 1, 25 Garcia, as modified by Zehavi, further discloses wherein the first radio comprises a base station, the remote radio comprises a user terminal, and the identifier comprises a connection identifier (CID) associated with the user terminal (section [30]).

**Consider claims 6, 30 (Original)** The method of claims 1, 25 Garcia, as modified by Zehavi, discloses wherein randomizing the received data comprises generating a scrambling sequence using at least part of the identifier as at least a part of an initialization vector, and combining the received data with the scrambling sequence (col 5 lines 54-65, col 7 lines 65-67, col 8 lines 33-40).

**Consider claim 8, (Original)** The method of claim 7, Garcia, as modified by Zehavi, discloses wherein the identifier is associated with a connection between the user terminal and the base station (col 5 lines 54-65, col 7 lines 65-67, col 8 lines 33-40).

**Consider claim 9, (Original)** The method of claim 8, wherein the connection comprises a session.

**Consider claim 10, (Original)** The method of claim 7, Garcia, as modified by Zehavi, discloses wherein generating the initialization vector further comprises using a second identifier associated with the base station (col 5 lines 54-65, col 7 lines 65-67, col 8 lines 33-40).

**Consider claims 11, 14, 21 (Original)** The method of claims 7, 12, 17 Garcia, as modified by



Zehavi, further discloses wherein generating the initialization vector further comprises using a frame number (sections [16], [36], [50]).

**Consider claim 13, (Original)** The initialization vector of claim 12, Garcia, as modified by Zehavi, further discloses a second identifier associated with the first radio (sections [33]-[35]).

**Consider claim 16, (Currently Amended)** The initialization vector of claim 12, Garcia, as modified by Zehavi, discloses wherein the first radio comprises a base station, the remote radio comprises a user terminal, and the second identifier comprises one of a base station ID (BSID), and a base station color code (BSCC) (col 5 lines 45-65).

**Consider claim 18, (Original)** The method of claim 17, Garcia, as modified by Zehavi, further discloses wherein generating the initialization vector further comprises using a second identifier associated with the user terminal/base station pair (sections [33]-[35]).

**Consider claim 19, (Original)** The method of claim 18, Garcia, as modified by Zehavi, further discloses wherein the second identifier is associated with a connection between the user terminal and the base station (sections [33]-[35]).

**Consider claim 20, (Original)** The method of claim 19, Garcia, as modified by Zehavi, further discloses wherein the connection comprises a session (section [30]).

**Consider claim 29, (Original)** The communications device of claim 25, Garcia, as modified by Zehavi, discloses wherein the communications device comprises a base station, the remote radio comprises a user terminal, and the identifier comprises a registration identifier (RID) associated with the user terminal (col 5 lines 45-65).

8. **Claims 2-3, 5, 15 and 26-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia, JR. et al (2005/0073945) in view of Zehavi (6,185,199), and further in view of Dent (5,742,678).

**Consider claims 2, 26, (Original)** The method of claims 1, 25, Garcia, as modified by Zehavi, discloses wherein the first radio comprises a user terminal, the remote radio comprises a base station, and the identifier comprises a base station (col 5 lines 45-55). Garcia, as modified by Zehavi, however, does not specifically show base station code. In an analogous art, Dent discloses base station code (see col 19 lines 55-67, col 20 lines 1-50). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Garcia, and having a base station code, as taught by Dent, thus improving the communication technique as discussed by Dent (see col 1 lines 10-67 and col 2 lines 10-67).

**Consider claims 3, 27 (Original)** The method of claims 1, 25 Garcia, as modified by Zehavi, discloses wherein the first radio comprises a base station, the remote radio comprises a user terminal, and the identifier of user terminal (col 5 lines 54-65). Garcia, as modified by Zehavi, however, does not specifically show user identifier. In an analogous art, Dent discloses user identifier (see col 19 lines 55-67, col 20 lines 1-50). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Garcia, and having a user identifier, as taught by Dent, thus improving the communication technique as discussed by Dent (see col 1 lines 10-67 and col 2 lines 10-67).

**Consider claim 5, (Original)** The method of claim 1, Garcia, as modified by Zehavi, discloses wherein the first radio comprises a base station, the remote radio comprises a user terminal, and the identifier associated with the user terminal (col 5 lines 45-65). Garcia, as modified by Zehavi, however, does not specifically show registration identifier. In an analogous art, Dent discloses registration identifier (see col 19 lines 55-67, col 20 lines 1-50). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Garcia, and having a registration identifier, as taught by Dent, thus improving the communication technique as discussed by Dent (see col 1 lines 10-67 and col 2 lines 10-67).

Consider claim 15, (Currently Amended) The initialization vector of claim 12, Garcia, as modified by Zehavi, discloses wherein the first radio comprises a base station, the remote radio comprises a user terminal, and the identifier comprises one of a user terminal, connection ID (CID), registration ID (RID), and a session ID (col 5 lines 45-65). Garcia, as modified by Zehavi, however, does not specifically show user ID, registration ID. In an analogous art, Dent discloses user and registration identifiers (see col 19 lines 55-67, col 20 lines 1-50). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Garcia, and having user and registration identifiers, as taught by Dent, thus improving the communication technique as discussed by Dent (see col 1 lines 10-67 and col 2 lines 10-67).

#### *Conclusion*

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy C. Ho whose telephone number is (571) 270-1108. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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